Data Collection by USM/DMS, November 200

November Cruise Summary

- Personnel: Xiaogang Chen, Merritt Tuel, and Egan Rowe
- Nov. 11 – 18, onboard *R/V Eugenie Clark*,
- Looe Key

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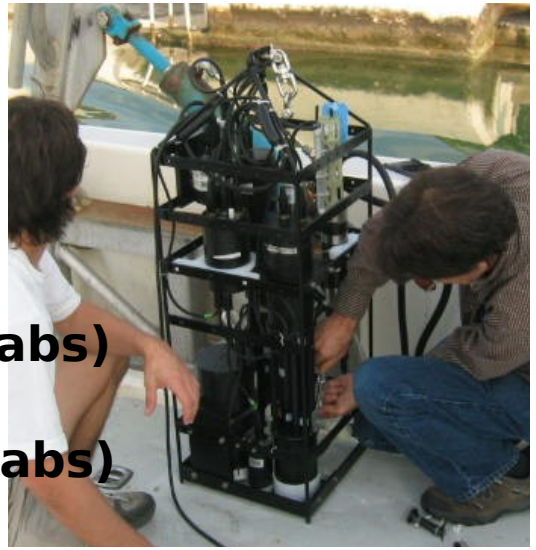
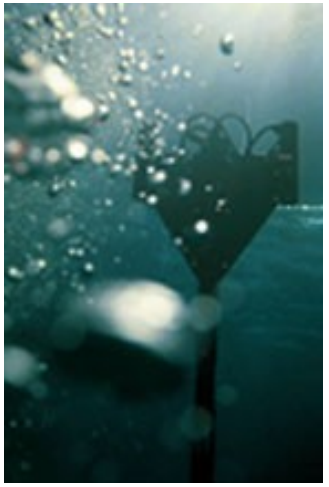
Equipment Array

- SBE490 CTD (Sea-Bird)
- ac-s absorption/attenuation meter (WetLabs)
- ac-9 absorption/attenuation meter (WetLabs)
- ECO VSF3 backscattering meter (WetLabs)
- ECO Triplet fluorescence sensor (WetLabs)
- DH4 Integration module (WetLabs)
- Micro-Pro, multispectral profiling radiometer (Satlantic)





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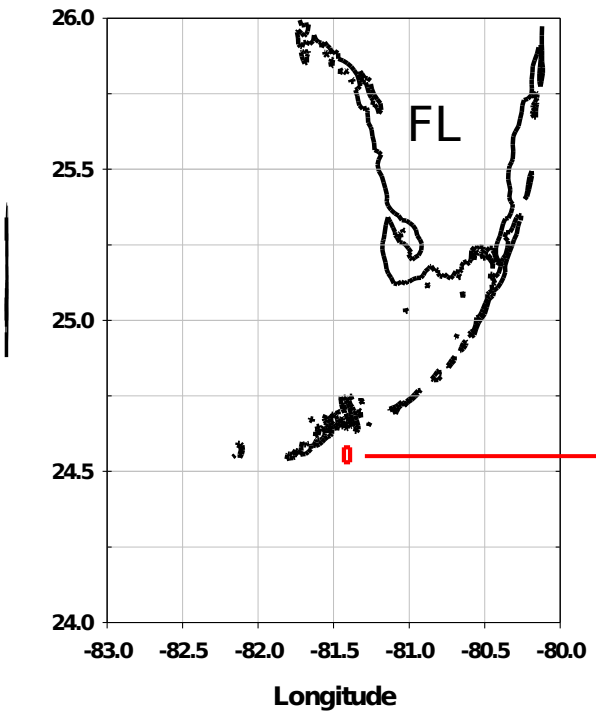
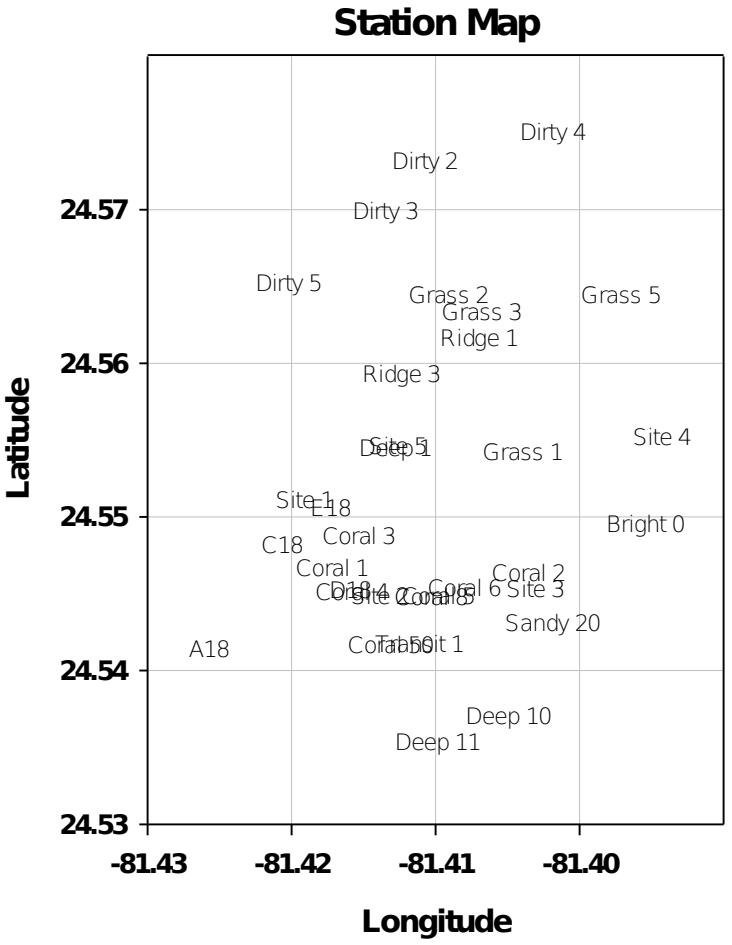
Sampling stations

- 35 locations sampled





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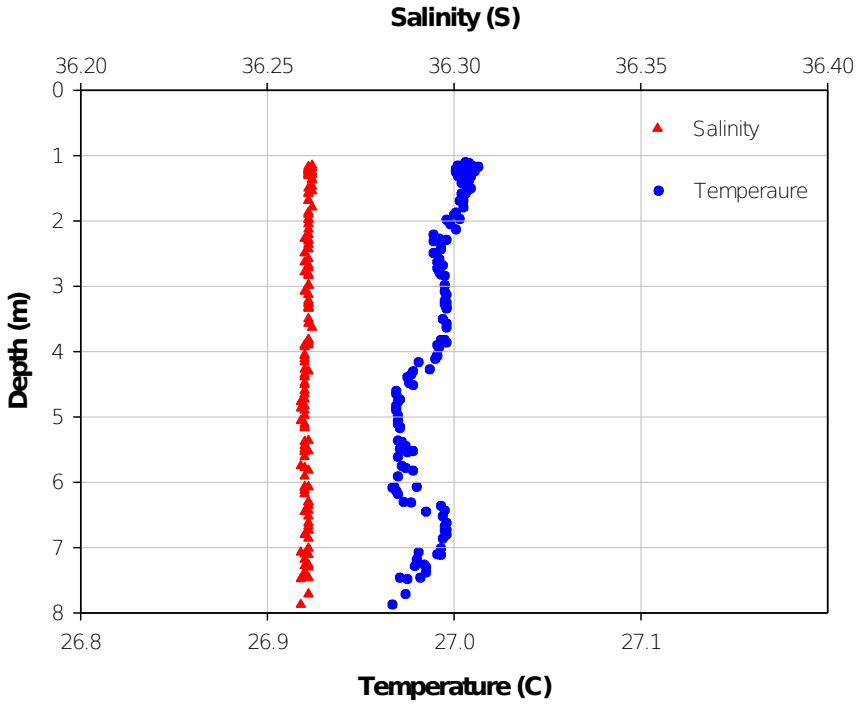
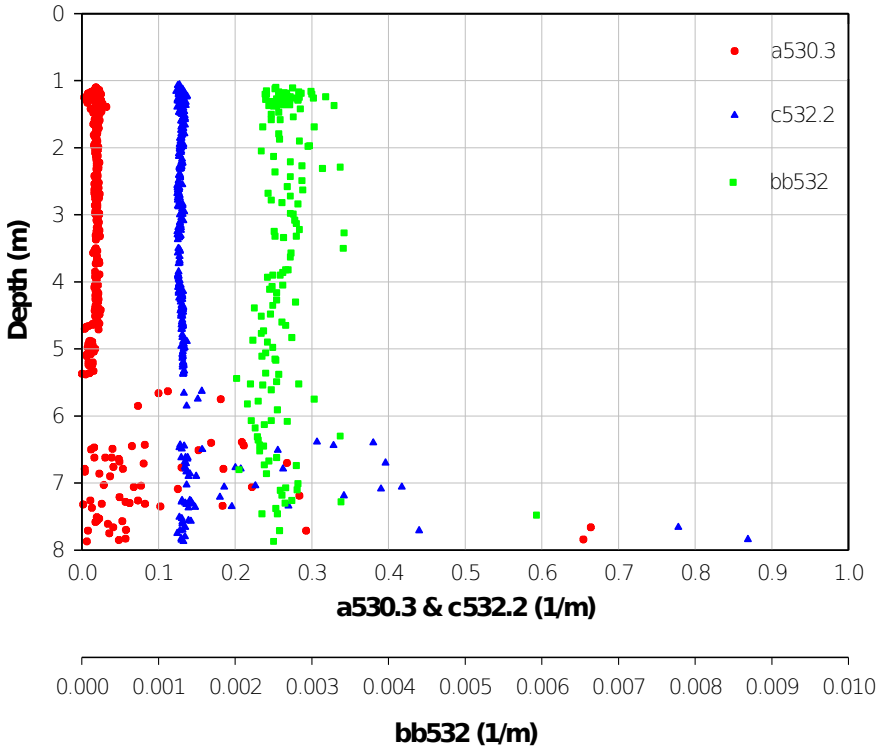
Station Bright

High temperature,
vertically homogenous



Low absorption,
attenuation
and backscattering



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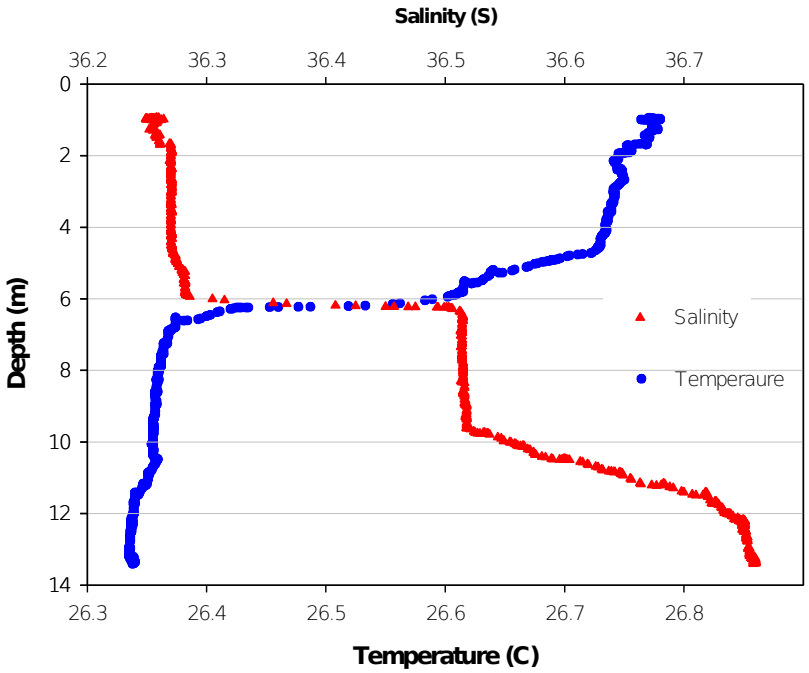
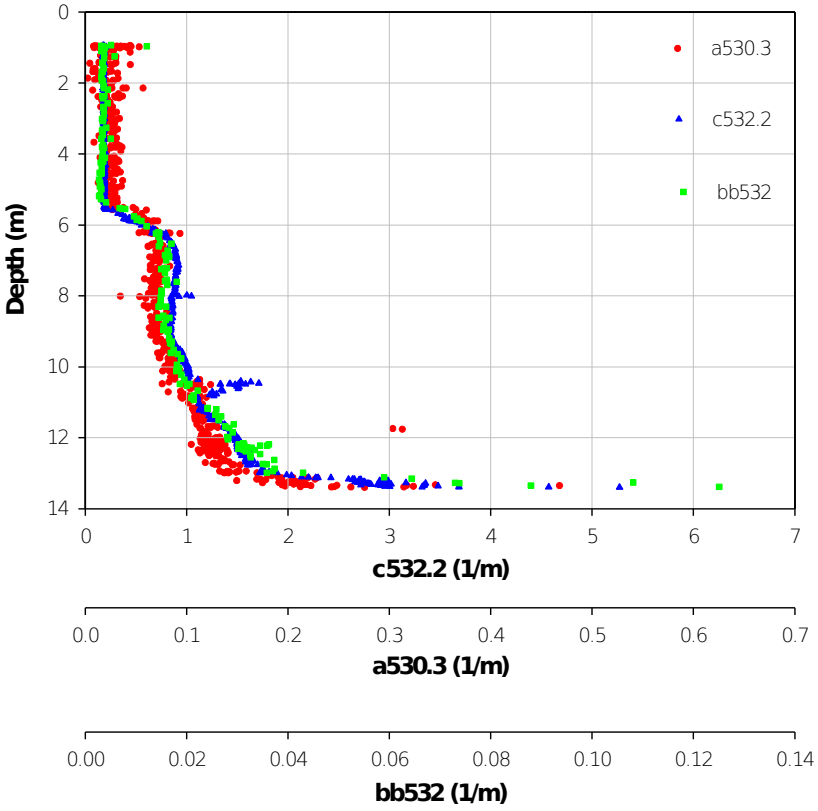
Station Dirty 3

Vertically heterogeneous



Clear surface water in comparison to the turbid bottom layer



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Problems Encountered

- High temperature and very clear water pushed the equipment to its limit
- Filters on ac-9 did not perform well, possibly due to not enough pressure to remove the bubbles inside
- Unstable 440 nm channel for ECO VSF3 (processing of other channels and post-calibration in progress)
- In some locations, Kd could not be computed due to tilting of MicroPro profiler or rolling of the boat

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Improvement for future cruise

- Better procedure of using filters on ac-9 in the shallow waters
- Recalibrate the instruments
- Provide thermal protection of instruments on deck
- If the boat capacity allows, provide more instruments on sampling array, including
    - ECO BB9 (more wavelengths)
    - LISST 100X (particle size distribution)
    - HyperSAS (surface remote sensing reflectance)
    - Water samples for pigments and CDOM (IOP for different constituents)